

Work Order ID 143787

Tuesday, March 22, 2016 2:38:31 PM

143787

Page 1

Item ID: D4918-047 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Wearplate Aft
Start Date: 3/23/2016 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 4/7/2016 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: W Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4918	A								
101		0.00							DAS 13 3-23
101		0.00				4		MAR 23 2016	
Purchasing	Memo								
Purchasing	ISSUE PO <u>31797</u>								
	CUT PER DRWG D4918-7 REV.A								
102	Receive & Inspect for Damage & Mat'l Certs	0.00							
102		0.00							4x Splice 04-7
Packaging	Memo								
Packaging									
103	QC5- Inspect part completeness to step on W/O	0.00							
103		0.00				(4)			DAS 38 3-23
QC	Memo								
Quality Control									

POSITIVE RECALL

EFFECTIVE 160524 AUTH 9
RELEASED PD DATE 17-05-03
Send one for test fit

JUN 09 2016
P.T.O.

DQA:

Date:

2017-07-21



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date: JUL 18 2017

Work Order update only ☐

Work Order: <u>43787</u>		DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. <u>D4918-047</u>		Rework ☐	Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐			
NCR No. <u>17-6533</u>		Scrap ☒	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐			
		Use-as-is ☒	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐			
		Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☒				
Date: <u>16-04-12</u>		Step #: <u>105</u>		QTY Effective: <u>1</u>		MRB (QSI042) Approval			
Description Work Order Deviation				Disposition		PD 17-05-08			
During inspection some dimension where found over tolerance. See attach FAI				Bend qty of 1 for last fit will be scrap after		Completed By DAS 30 9-89 MAY 08 2017			
R.C. supplier						Lead hand / Supervisor Approval Verification PD 17-05-08			
						QC / QA Coordinator Approval PD 17-05-08			
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☒				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☒	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

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Page 2

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 Required Date: 4/7/2016 Req'd Qty: 4.00 ***4*** Customer:
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
108	Form as per dwg	0.00							
108					DAS	4			JUN 07 2016
Brake NC	Memo	0.00			30				
Brake NC					9-89				
109	QC5- Inspect part completeness to step on W/O	0.00							
109						(4)			
QC	Memo	0.00							JUN 09 2016
Quality Control									
120		0.00							
120						3	Q.L	17-05-04	
Large Fab	Memo	0.05							
Large Fab	1- Weld hardcoat on as per dwg A/R 2059b hardcoat Batch#: <u>1132070</u>								

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Page 3

Apply Rockguard on entire concave surface as per dwg
A/R Rockguard Batch: 107327

(3) 17.05.04 20

(3) 17-05-03 10

(3) _____ \$
1705.12

Work Order ID 143787

Tuesday, March 22, 2016 2:38:31 PM

143787

Page 4

Item ID: D4918-047 Accept ***N900040100*** Setup Start ***NS1***
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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

160	QC5- Inspect part completeness to step on W/O	0.00							
-----	---	------	--	--	--	--	--	--	--

160

QC

Memo

0.00

Quality Control

MAY 18 2017

170	Identify as per dwg & Stock Location: <u>FP-002</u>	0.00							
-----	---	------	--	--	--	--	--	--	--

170

Packaging

Memo

0.00

Packaging

x3 d 44 13/05/16

180	QC21- Final Inspection - Work Order Release	0.00							
-----	---	------	--	--	--	--	--	--	--

180

QC

Memo

0.01

Quality Control

17/5/19

u 17-05-19

Picklist Print

Tuesday, March 22, 2016 2:38:31 PM

Work Order ID: 143787

143787

Parent Item: D4918-047

D4918-047

Parent Item Name: Wearplate Aft

Start Date: 3/23/2016

Required Date: 4/7/2016

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A 13.11.01 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4918-7P		Purchased	No				Each	0.0000		4			
D4918-7P									**				
Wearplate Aft													
M304S16GA		Purchased	No			100	sf	105.7090	0.412	1.734737			
M304S16GA									**				
304/316 Sheet .063													

4x SP16-AL7.

APR 01 2016
DAS 13 9-89

Location

Loc Qty

Loc Code

MAT019

105.709

m134067

3.906

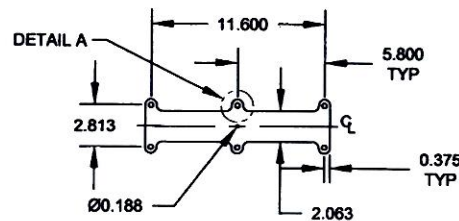
m134158

37.803

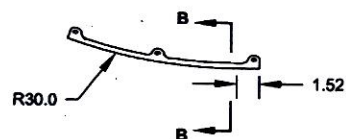
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64

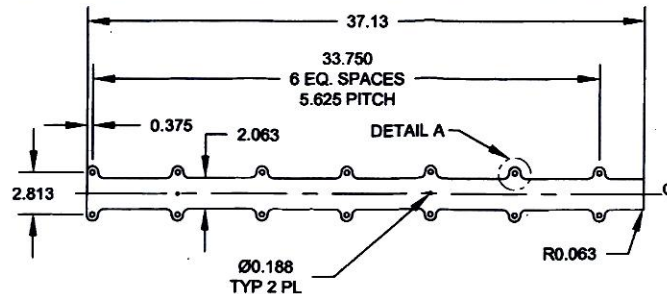
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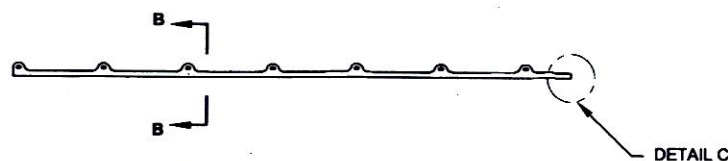
D4918-1F FLAT PATTERN



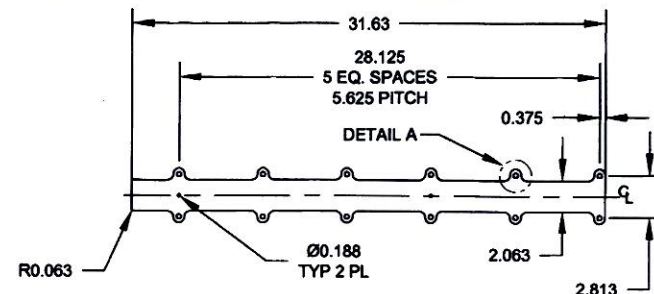
D4918-1 BENDING DETAIL
(MAKE FROM D4918-1F)



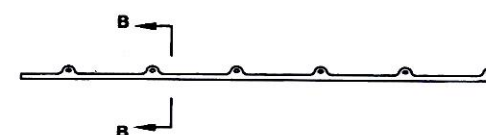
D4918-3F FLAT PATTERN



D4918-3 BENDING DETAIL
(MAKE FROM D4918-3F)



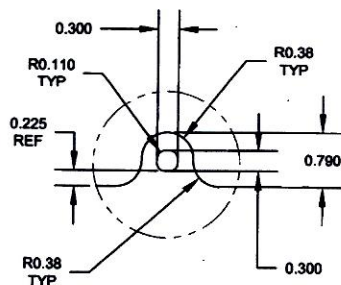
D4918-5F FLAT PATTERN



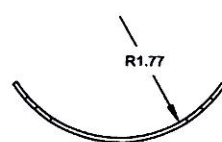
D4918-5 BENDING DETAIL
(MAKE FROM D4918-5F)

NOTES:

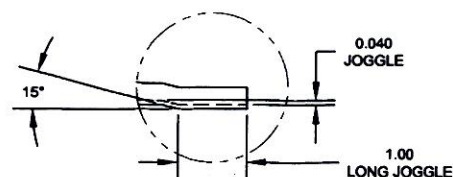
- 1) MATERIAL: AISI 304/316 SS SHEET PER AMS 5513 OR AMS 5524, 20 GAUGE (0.038 THICK)
(REF. DART MATERIAL SPEC M304S20GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D4918-1 - 0.47 lbs, D4918-3 - 0.95 lbs, D4918-5 - 0.77 lbs.
- 8) COAT ENTIRE TOP (CONCAVE) SURFACE WITH PLUS ONE ROCKGUARD 4714, 0.020-0.040 THK



DETAIL A
(SCALE 4X)



SECTION B-B
(SCALE 4X)



DETAIL C
(SCALE 4X)

REV.	NEW ISSUE	DESCRIPTION	DW	13.08.30
DESIGN	DW		BY	DATE
DRAWN	DW			
CHECKED	UP			
MFG. APPR.				
APPROVED				
DE APPR.				
DATE	13.08.30			

DART AEROSPACE USA, INC
KENT, WA

DRAWING NO. D4918
REV. A
SHEET 1 OF 3

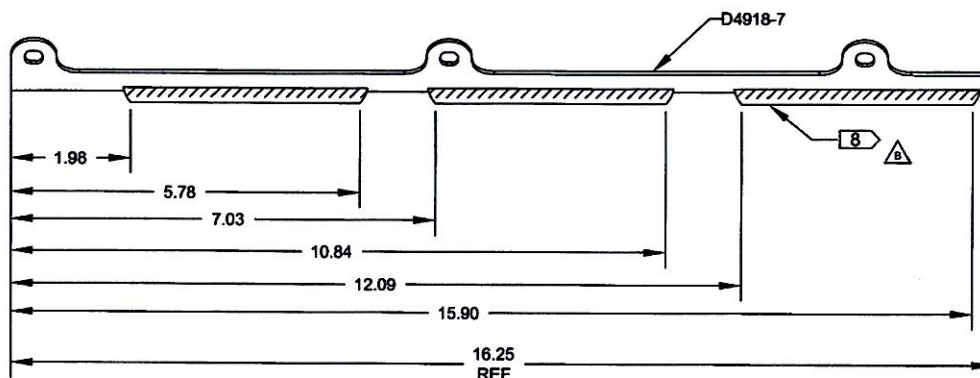
TITLE WEARPLATE
SCALE NTS

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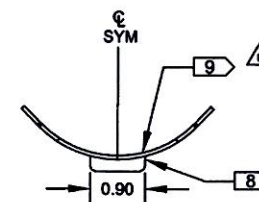
RELEASED
2013-12-10

WLC 143787

ITEM	QTY -047	P/N	DESCRIPTION
	X	D4918-047	WEARPLATE
1	1	D4918-7	WEARPLATE
2	A/R	8259 OR 2059B	HARDCOAT (AUTOMATED) HARDCOAT (MANUAL)



D4918-047 WEARPLATE
MAKE FROM D4918-7



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 143787 MJS

1705-03

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4918-047" PER QSI 044 6.1
- 7) WEIGHT: 2.18 lbs
- 8) APPLY 2 LAYERS OF HARD SURFACING WELD BEAD 0.19 TO 0.25 THICK USING 8259 ROD PER QSI 004 SECTION 4.5 (AUTOMATED WELDING) OR APPLY 2 LAYERS OF HARD SURFACING WELD BEAD 0.19 TO 0.25 THICK USING 2059B ROD PER QSI 004 SECTION 4.1 (MANUAL WELDING)
- 9) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING 0.020-0.040 THICK PER QSI 005 4.9

RELEASED
2017-04-12

DESIGN	DW	DART AEROSPACE USA, INC	
DRAWN	SAD	EUGENE, OR	
CHECKED	<i>MJS</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>MJS</i>	D4918	SHEET 2 OF 3
APPROVED	<i>MJS</i>	TITLE	SCALE
DE APPR.	<i>MJS</i>	WEARPLATE	NTS
DATE	17.02.14	COPYRIGHT © 2007 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

DQA: _____ Date: _____

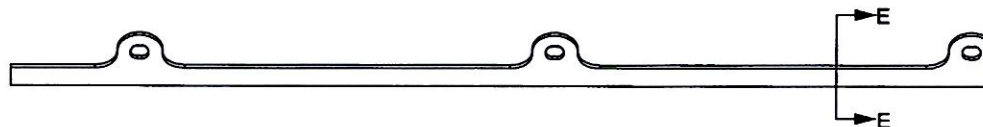


WORK ORDER NON-CONFORMANCE / UPDATE

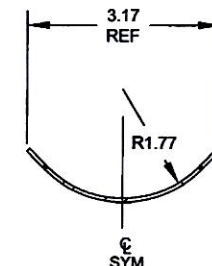
QA Closed: _____ Date: _____

Work Order update only ☐

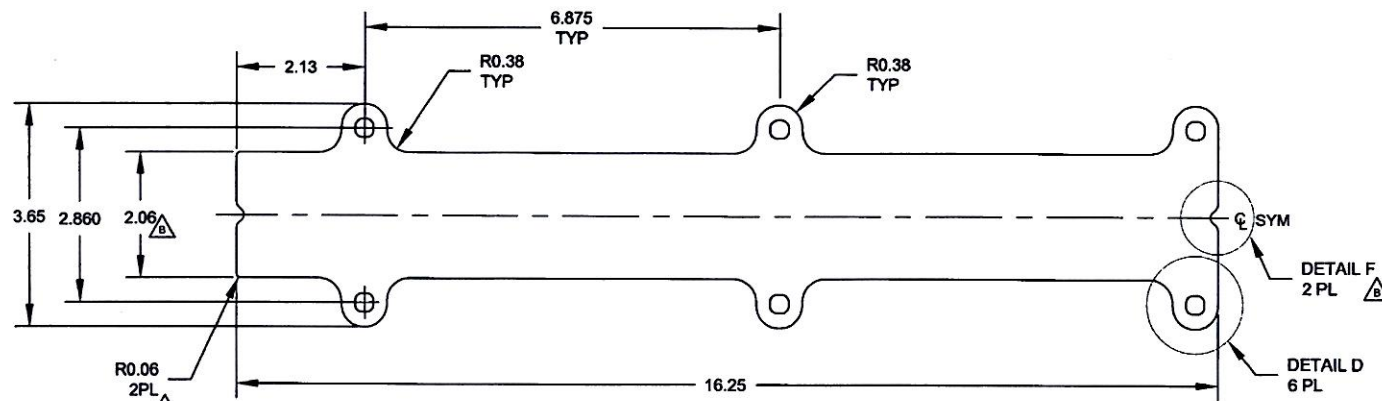
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
		OTHER : ☐							



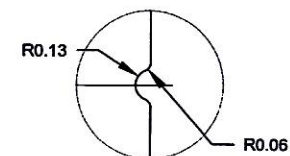
D4918-7 WEARPLATE
MAKE FROM D4918-7F



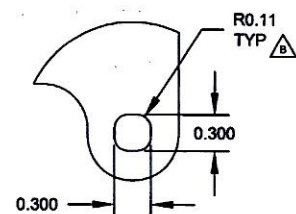
SECTION E-E
SCALE 2X



D4918-7F WEARPLATE
FLAT PATTERN



DETAIL F
SCALE 2X



DETAIL D
SCALE 2X

NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED PER MIL-S-5059 OR AMS 5513
OR AMS 5524 OR ASTM A240 OR ASME SA240
16 GAUGE (0.063 THICK)
(REF. DART SPEC. M304S16GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.66 lbs

RELEASED
2017-04-12

DESIGN	DW	DART AEROSPACE USA, INC	
DRAWN	SAD	EUGENE, OR	
CHECKED	<i>M. Lee</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D4918	SHEET 3 OF 3
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WEARPLATE	NTS
DATE	17.02.14	COPYRIGHT © 2007 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐								
		OTHER : ☐							



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO31797**

Purchase Order Date 3/23/2016
PO Print Date 3/23/2016

Page Number 3 of 7

Order From :
TPI INDUSTRIES INC.
148 RUE GOODFELLOW
DELSON, QUEBEC J5B 1V4
CANADA

VC-TPI001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 450-633-0484

Ship To Contact
Ship To Phone
Ship Via:
Ship Acct:

Buyer
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB Destination-Collect

Line Total: **\$240.00**

6	D3564-5P	Wearplate Center	4/20/2016 FN	6.00	\$27.00	\$162.00
			Yes	Each		
			4/20/2016			

CUT AS PER DWG D3564 REV. D
B142890
MATERIAL 304 SHEET 16GA

Line Total: **\$162.00**

7	D4095-1P	Wearplate	4/20/2016	6.00	\$27.00	\$162.00
			Yes	Each		
			4/20/2016			

CUT AS PER DWG D4095 REV. C
B142731
MATERIAL 304 SHEET 16GA

Line Total: **\$162.00**

8	D4918-7P	Wearplate Aft	4/20/2016 FN	4.00	\$10.15	\$40.60
			Yes	Each		
			4/20/2016			

CUT AS PER DWG D4917 REV. A
B143787
MATERIAL 304 SHEET 16GA

SP/6-04-7

Note:

3/23/2016

T.P.I. INDUSTRIES INC.

148 GOODFELLOW
DELSON, QUÉBEC J5B 1V4
CANADA
Tel: (450) 633-0484
Fax: (450) 633-0879

Packing Slip

Packing Slip No.: 7442
Date: 2016-04-05
Page: 1

Sold to: Dart Aerospace Chantal Lavoie 1270 Aberdeen Hawkesbury, Ontario K6A 1K7 Canada	Ship to: Dart Aerospace Chantal Lavoie 1270 Aberdeen Hawkesbury, Ontario K6A 1K7 Canada
Order No.: 31797	Sold By: JONATHAN LESSARD
Shipped By:	Ship Date: 2016-04-05
Tracking No.:	

Item No.	Unit	Description	Quantity
d2947	Chaque	d2947 clamp	90
d3537-1	Chaque	d3537-1 wearpad	40
d3564-11	Chaque	d3564-11 wearplate	10
d3564-5	Chaque	d3564-5 wearplate	6
d4095-041	Chaque	d4095-041 wearplate assy	8
d4095-045	Chaque	d4095-045 wearplate assy	8
d4095-047	Chaque	d4095-047 wearplate assy	4
d 4918-7			
D 4918-7			
SP 16-04-7			
Comment: Net / 30 from date of invoice 2% svc. chg. on invoices over 30 days			

THYSSENKRUPP MATERIALS NA

DART AEROSPACE

STAINLESS STEEL SHEET 304L-2B DUAL GRADE
.0600 Nom X 48.0000" X 96.0000"
PART NO.

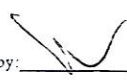
PO/Rel 31741

We certify that this is a true copy of the report
furnished by the producer of the metal, or data
resulting from tests made in approved labs.

Certificate of Mill Test Results

BL PEC-983229-003

21Mar16
Pg 1/1

Signed by: 



METALLURGICAL TEST REPORT

North American Stainless Canada Inc.
740 Imperial Road North
Guelph, ON N1K1Z3
Canada

740 Imperial Road North

Certificate: 120157 1 Mail To:
THYSSENKRUPP MATERIALS
Customer: 007206 001 2821 LANGSTAFF ROAD
CONCORD, ON L4K5C6

Ship To:
THYSSENKRUPP MATERIALS
2821 LANGSTAFF ROAD
CONCORD, ON L4K5C6

Date: 12/03/2015 Page: 1

Steel: 304/304L

Finish: 2B

Corrosion: ASTM A262/14;18OBend-OK

Your Order: PEC271093

NAS Order: WN 0072789 03

PRODUCT DESCRIPTION:

STAINLESS STEEL COIL, C.R. ANNEALED & PICKLED. UNS 30400/30403
ASTM A240/15a,A480/14b,A666/15;ASME SA240/13,SA480/13,SA666/13
CHEM ONLY ON FOLLOWING ASTM: A276/13,A479/13a,A484/13a,A312/13
CHEM ONLY ON FOLLOWING ASME: SA312/13,SA479/13
AMS 5511H/5513J XMRR; MIL-5059D AMD3(X CRN MEAS); MIL-4043B
NACE MR0175/ISO 15156-3:2009 A, MR0103/07/QQS766D-A X MAG PERM
MIN. SOLUTION ANNEAL TEMP 1900F, WATER QUENCHED

REMARKS:

Mat'l is Free of Mercury Contamination. No weld repairs.
EN 10204:2004 3.1; RoHS 1 & 2 Compliant
Material is Free of Radioactive Contamination
Steel Making Process: EAF, AOD, & Cont. Casting
Product Mfg.by a Quality Mgt.Sys. in Conf. w/ISO 9001
*Melted & Manufactured in the USA; Mat'l is DFARS Compliant

Product Id	Coil #	Skid #	Thickness	Width	Weight	-----Length-----	Mark	Pieces	Commodity Code
05X1X2 CA	05X1X2 C		.0575	48.0000	4,950	SHEETS	096.00	64	

Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323
CHEMICAL ANALYSIS CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan) Chemical Analysis per ASTM A751/08

HEAT	CM	C %	CR %	CU %	MN %	MO %	N %	NI %	P %	S %
X1X2	US	.0216	18.2925	.3910	1.7545	.5130	.0897	8.0095	.0275	.0031
SI %										
.2670										

MECHANICAL PROPERTIES

Product Id#	Coil #	1 d o i c r	UTS KSI	20C .2% YS KSI	20C ELONG %-2"	Hard RB	Tail Hard
05X1X2 CA	05X1X2 C	F T	97.24	49.89	47.19	87.00	85.00

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical
Dept. Mgr.

